

# **STATE OF UTAH GENERAL OUTLOOK**

**Jan 1, 2004**

## **SUMMARY**

Water year 2004 has been fantastic so far! All areas of the state except the Escalante currently have snowpacks that are above average, perhaps a little light at the end of a long tunnel. There is still more than 50% of the snowpack accumulation season remaining and any outcome is still possible, but having 1.5 to 2 times the snowpack that Utah had last January is certainly a great start. Snowpack is the driving mechanism to Utah's water supply and the state needs a much greater than normal snowpack year to begin the repair of other drought induced water supply problems such as low reservoir storage, soil moisture and aquifer levels. In many areas, multiple above average snowpack years will be needed to fill reservoirs and aquifers. A case in point is the Bear River watershed: recent USGS streamflow data at the Utah/Wyoming Stateline gage showed 40 second feet while at the Woodruff gage many miles downstream, the flow was only 20 second feet. This indicates a losing stream-reach – water going from the river to recharge soil moisture and aquifer levels. Last year, observed Bear Lake inflow was only 8,000 acre feet, while at the Stateline gage, there was 83,000 acre-feet of water, 10 times more than at the downstream location – essentially a river in reverse. These conditions are not just affecting the Bear River, but other major river systems in Utah as well and could persist until aquifer levels are restored. Snowpacks in northern Utah range from 111% to 135% of average and in southern Utah, from 80% to 120% of normal. Given average snowpack accumulation between now and April 1, the state will have about 109% of average, given maximum accumulation – 170% of average and given minimum accumulation, at 79% of average snowpack. Precipitation for December was much above average state wide, ranging from 126% to 171% of average, bringing seasonal precipitation, (Oct-Dec) to 106%. Soil moisture deficits in runoff producing areas across the state range from 6 to 9 inches in the upper 2 feet of soil – similar to deficits of last year. Streamflow forecasts are scattered across the spectrum, ranging from 19% to 129% of average. Reservoir storage in 41 major reservoirs across the state is at 38% of capacity, down 9% from last year which is about 481,000 acre feet. 481 KAF is roughly 80,000 acre feet more water than the entire Sevier River reservoir storage capacity. Reservoir storage is down 1,557,000 acre feet (29%) from 2001 levels, reflecting the persistent nature of this drought. Surface Water Supply Indexes range from 2% on the Bear River to 73% over the western part of the Uintah Basin.

## **SNOWPACK**

January first snowpacks as measured by the NRCS SNOTEL system range from 107% in southern Utah to 135% on the Utah Lake watershed. The lowest snowpacks are on the Escalante at 80% of average. This is the best January 1 snowpack on every watershed statewide since 1997. There is still some concern about lower elevation snowpacks in southern Utah. Statewide, snowpacks are at 123% of average, a welcome respite from years of below normal conditions.

## PRECIPITATION

Mountain precipitation during December was much above average (147%) statewide. In northern Utah precipitation ranged from 126% on the Bear to 155% on the Provo. Southern Utah had precipitation values ranging from 149% in the southeast to 171% over the Sevier watershed. This brings the seasonal accumulation (Oct-Dec) to 106% of average statewide.

## RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 38% of capacity. This is down substantially from last year indicating heavy use of reservoir storage to make up the streamflow deficit. Most reservoir operators are utilizing a conservative strategy, storing as much water as possible.

## STREAMFLOW

Snowmelt streamflows are expected to be much below to near average across the entire state of Utah this year. Forecast streamflows range from 19% on the Bear at Stewart dam to 129% on Wheeler Creek. Most flows are forecast to be in the 80% to 100% range. Overall water supply conditions are below to near normal.

